Province of British Columbia
Ministry of Energy, Mines
and Petroleum Resources
Hon. Jack Weisgerber, Minister

Mineral Resources Division
Geological Survey Branch

GEOLOGICAL SURVEY BRANCH
1991-92 PLAN

Information Circular 1991-12

92-01074/

1991-92 GEOLOGICAL SURVEY BRANCH PLAN

PREFACE

This plan is a summary of the Branch's business and what it intends to accomplish in the 1991/92 Fiscal Year. It outlines our mandate, key functions, organization, 1991/92 Action Plans and new initiatives. It should be used in conjunction with the Branch's project inventory, which details all the major projects the Branch will undertake this year. The plan and the inventory are developed by Branch staff to help us translate our goals and objectives into measurable, achievable outputs.

MANDATE

Assemble, maintain, and disseminate an up-to-date, comprehensive geoscience database for British Columbia so as to provide a sound base for private sector exploration and development of the province's mineral resources, for resource management decisions by Government, and for public information.

KEY FUNCTIONS

DATA COLLECTION

- Data are collected in two ways. Firstly, by the Branch through its programs of integrated geological and geochemical surveying and secondly, by way of information made available by legislation under the *Mineral Tenure Act* and the *Coal Act*. Results of annual mapping programs and research are published annually in Geological Fieldwork and other Branch publications. To ensure projects are targetted to meet the needs of industry and other clients, they are vetted annually by an Industry Technical Liaison Committee.

DATA CURATION AND RETRIEVAL

- Curate and store the confidential and non-confidential geoscience information coming to the Branch so that it can be readily retrieved in an appropriate form by users.
- Maintain a manual assessment report library, a manual file on mineral properties, and three computer files - MINFILE, COALFILE, and Regional Geochemical Survey Data (RGS), for rapid retrieval and use by industry and government.

DATA ANALYSIS AND INTERPRETATION

- Synthesize and interpret the variety of data received from prospectors' reports to mining company reports, in the most cost effective way, to provide a quality provincial geoscience database and publish an annual summary of exploration activity in the volume *Exploration in British Columbia*.
- Provide timely analytical laboratory services and advice in support of Branch survey activities and Ministry programs.
- Assemble and maintain a file on the quality of B.C. coals to promote their use, raw or blended, in new markets.

PROVISION OF SERVICES

- Provide geological services to the public and government from five District Offices (Smithers, Prince George, Kamloops, Nelson, Victoria), a Branch Office in Vancouver, and headquarters in Victoria. Disseminate information through publications, publicly available databases, scientific meetings, trade shows, and an annual open house in Vancouver. Provide prospector training courses throughout the province.

MARKETING INFORMATION

- Market the Branch's geoscience databases and publications in innovative ways to respond to users' needs and to raise revenue.

REGULATION

- Verify company work assessment reports submitted in compliance with the *Mineral Tenure Act* and *Coal Act* within 60 days of receipt. Verification ensures quality data is submitted to province's geoscience database.
- Certify assayers in B.C. as required under the *Ministry Act*. Hold up to two examinations annually.

POLICY

- Improve the effectiveness for evaluation of, and exploration for, mineral, coal and industrial mineral resources through development of integrated, geoscience databases.
- Promote exploration and mine development and attract mineral investment in B.C. Favourable geology and a comprehensive geoscience database are the primary drawing cards to attract private sector mineral exploration investment in an internationally competitive area.
- Provide geological information and advice on land use issues; conduct geological surveys and to determine mineral potential as required. Provide information on the subsurface for the Government departments involved in land administration.
- Provide advice on provincial mineral and coal resources, supplies and related technical matters as input to provincial regional economic development initiatives.
- Review, recommend and coordinate geoscience programs to be carried out in British Columbia by the Geological Survey of Canada to ensure Federal programs meet the needs of the province.
- Play a coordinating role on natural hazard research in British Columbia and ensure Government is appraised of the risks.

PUBLIC INFORMATION

- Prepare and disseminate geoscience information targetted at the general public to create a greater awareness of the impact of geology on key issues affecting the everyday life of British Columbians, such as the environment, land and resource use, natural hazards risk and life-style dependence on raw materials.

1991/1992 OBJECTIVES/PRIORITIES

Branch objectives in 1991 continue to be focussed on improving the level of geological surveying in British Columbia and publishing this data, much in modern digital format, in a timely manner.

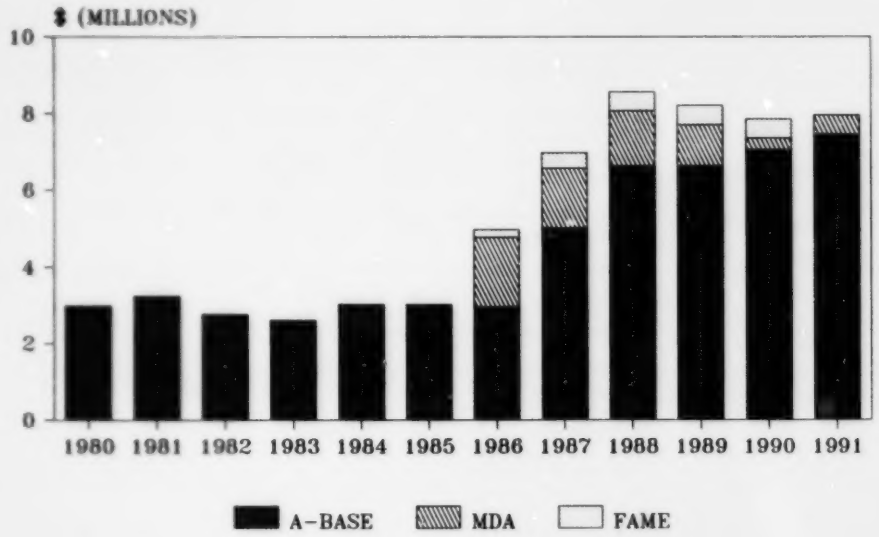
- A priority for the Branch in 1991 is the renewal of the Federal-Provincial Mineral Development Agreement. New resources, will be directed at facilitating the metal discovery process through enhancement of the scope of 1:50 000-scale geological mapping, implementation of a GIS system for geoscience information, and provision of more regional geochemical surveys.
- More effective planning and cooperation with the Geological Survey of Canada is a priority for 1991 to ensure Federal geoscience programs are targetted to meet Provincial needs, and that there is no duplication of effort.
- The planned reorganization of the Branch became effective April 1, 1991. A priority for 1991 will be to fill many of the acting positions on a permanent basis and to make the reorganization work effectively. To better serve our clients the office of the district geologist for the Southwestern District will be transferred to Vancouver later in the year. In addition, a number of staff transfers in the District Offices are planned.
- In May the Geological Survey Branch consolidated its four Victoria offices in a building adjacent to the other Branches of the Division. This is the first time in over 20 years that the Branch has been housed in a single facility. A priority is to ensure greater cooperation between the sections and more integrated, multi-disciplinary studies.
- More efforts will be expended on staff development and training. A number of short courses and field trips are planned for professional staff and general training courses for support staff.

1991/92 KEY PROJECTS

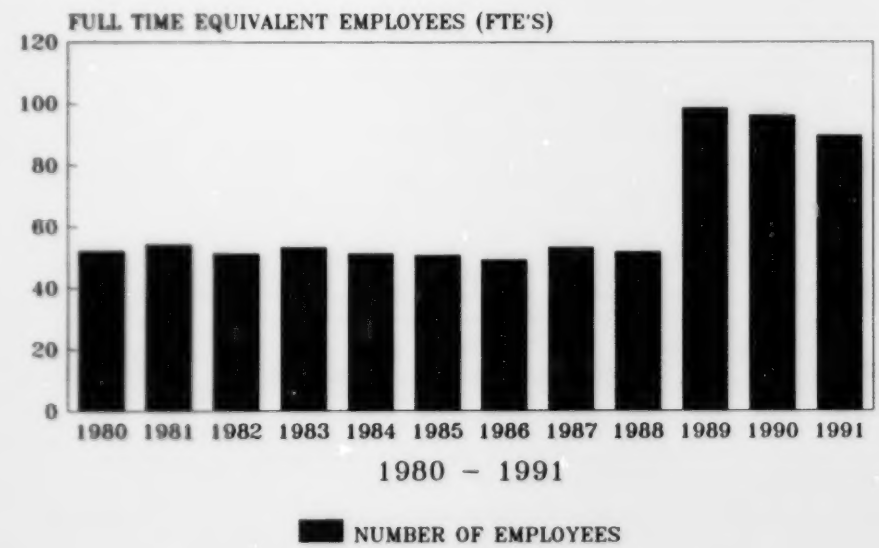
A number of new key initiatives are planned for 1991/92 in addition to ongoing projects identified by each Section in the following pages.

PROJECTS	DESCRIPTION	RESPONSIBILITY
Industrial Minerals Forum	Co-host with Alberta the "27th International Forum on The Geology of Industrial Minerals" and showcase B.C's industrial mineral potential through posters, talks and field trips.	Economic Geology Section Geoscience Information Section
Coal Bed Methane	Evaluate and promote development in B.C. of this potential new resource.	Coal Unit
Geological Hazards	Prepare a discussion paper for Ministry Executive on this subject; document roles and responsibilities of various Government departments and identify any critical gaps.	Environmental Geology Section
Mineral Deposits	Develop cooperative projects with the new Mineral Deposits Research Unit at The University of B.C., to ensure projects are targetted to meet provincial needs, there is no duplication of effort, and their data is acquired and integrated into the Provincial geoscience database.	Economic Geology Section
Public Information Program	Initiate a public information program to create a greater awareness of the relevance of geoscience to the everyday life of British Columbians, from geological hazards to the environment, to the value of our mining industry to society and our way of life.	Geoscience Information Section
Acid Rock Drainage	Provide geochemical advice and assistance to the Engineering and Inspection Branch with respect to sampling and analysis of problem sites.	Analytical Sciences Laboratory
Certification of Assayers Program	Conduct an evaluation of this long standing program to determine its relevance and future role. Sciences.	Analytical Sciences Laboratory
Geographic Information System	Conduct a pilot test of the new GIS system, utilizing a number of Division databases to demonstrate its usefulness to the Branch in geoscience analysis and to the Division in mineral resource evaluation and management.	All Sections
Final Publications	Examine the various publication series issued by the Branch to determine the publication medium that will best meet client needs in terms of data quality, presentation style, and timeliness of publication. Research and writing time for bulletins is now taking from two to four years to complete after fieldwork is completed. This is seriously affecting the usefulness of the data to clients, and significantly increases project budgets.	Managers SRO
Research Scientist Plan	Implement this new plan for research geologists, which will tie the job evaluation system and monetary rewards to individual achievement and the pursuit of scientific excellence. Clearly defined career paths from LSO3 to LSO6 classifications will be available to qualifying geologists.	Managers
Human Resources	Develop and implement training plans for all employees and give them the skills and motivation to increase productivity, and to keep abreast of changing technology and science.	Managers

GEOLOGICAL SURVEY BRANCH BUDGETS
1980 - 199?



GEOLOGICAL SURVEY BRANCH STAFFING
1980 - 1991



BUDGET

The base budget of the Branch in fiscal year 1991/92 is $7,451,040 million. This is an increase of over 1990/91 due to inclusion of $76,620 for the Prospectors training program in the Branch base budget and an increase of $225,000 in operational funds. The latter will allow the two regional mapping projects in the Iskut area, which were suspended last year, to be restarted.

The Canada–British Columbia Mineral Development Agreement is expected to be renewed in 1991 and the Branch has been allocated $505,000 under this program for geoscience work this year.

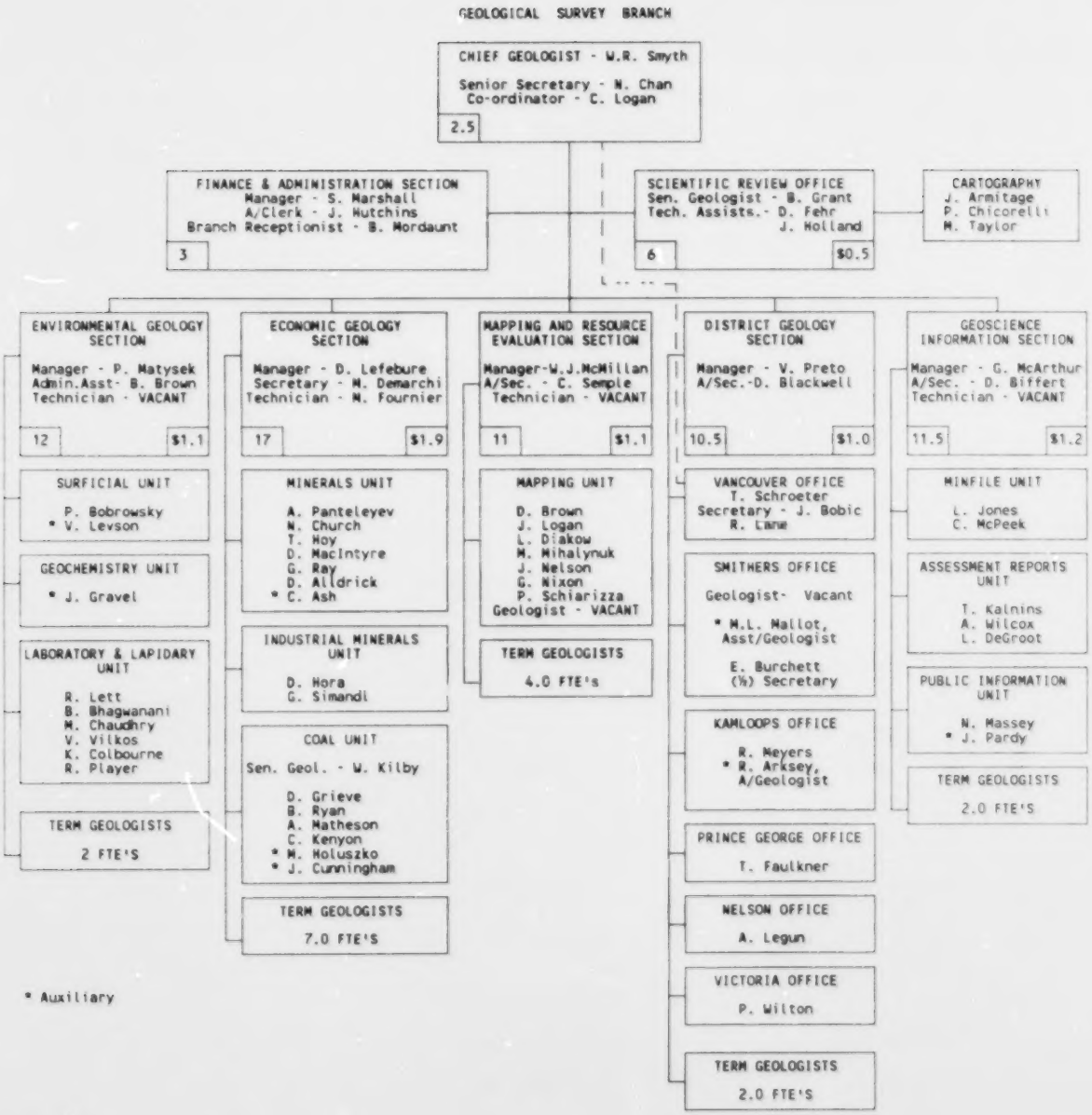
1991/92 GEOLOGICAL SURVEY BRANCH BUDGET

OPERATIONAL GROUP	BASE BUDGET
Chief Geologist's Office	527,493
Scientific Review	494,343
Mapping and Resource Evaluation	1,783,315
Economic Geology	1,941,716
District Geology	1,026,276
Geoscience Information	1,031,785
Environmental Geology	1,100,455
Geoscience Grant Program	95,000
Total	*$7,451,040*

MINERAL DEVELOPMENT AGREEMENT BUDGET	
Northern Quesnel Trough Project	170,000
Chilcotin Project	260,000
Geographic Information Systems Project	75,000
Total	*$505,000*

STAFFING

The Branch has 89 FTEs in fiscal year 1991/92. This is a decrease of 7 FTEs over the previous year as our short term, summer students are now hired on cooperative programs and on contracts. Of the 89 FTEs 67 are filled on permanent basis, 22 on term auxiliaries. The term auxiliaries are hired to work on mapping/research projects of predetermined lengths, but usually no more than 4 years.



* Auxiliary

$ = 10^6

June 25, 1991

The Branch is currently organized into six sections; five technical and one administrative.

All sections, including the Scientific Review Senior Geologist and Branch Coordinator, report directly to the Chief Geologist.

This publication outlines the objectives, resources, action plans and new initiatives of each of the sections and their various units.

REORGANIZATION

Following a detailed independent review of the Branch in 1989-90 by the Canadian Geoscience Council (Barnes Report, Information Circular 1990-8) and a follow-up study by the consulting firm of Peat Marwick Stevenson & Kellogg, a reorganization plan for the Branch was developed. Basic elements include:

- Splitting the old Mineral Deposits and Regional Mapping Section into two sections.
- Amalgamation of the three units involved in economic geology research - metallic, coal and industrial minerals - into a single section.
- Initiation of a new program of Public Information.
- Creation of a new Finance and Administration Section to handle the increased responsibilities resulting from devolution of administrative functions to the Branches from the Ministry's central agency.

The new organization went into effect April 1, 1991. Staffing, as a result of the reorganization, is expected to be completed by September 1st, 1991.

ECONOMIC GEOLOGY SECTION

MANDATE

- Produce databases, maps and reports concerning coal and mineral deposits to assist private sector exploration and government planning and policy making.
- Play a leadership role within the province through talks, visits and consultations.
- Develop modern deposit models and improve our understanding of the economic geology of British Columbia.

COAL RESOURCES UNIT

OBJECTIVES

- Conduct regional and deposit scale mapping and coal studies to determine the potential of the province's coal and associated coalbed methane resources.
- Produce an up-to-date inventory of coal resource quality and quantity information.
- Maintain COALFILE, a computer-based file of coal exploration data.
- Inspect and curate coal assessment reports.
- Provide advice to the government on the Mine Development Review Process and coal research and development.
- Promote inter-governmental coal research projects.
- Advance the understanding of coal and its utilization by the public.

STAFFING AND RESOURCES

8 FTEs; $616,148.

ACTION PLAN

ACTIVITY	RESPONSIBILITY	OUTPUT
FIELD PROJECTS:		
Coal Quality	Grieve/Holuszko	Catalogue & Brochure Papers
Northwestern B.C. Compilation	Ryan	Open File Maps,
Peace River	Kilby/Cunningham	Papers, Bulletin
Thermal Coal Drilling Program	Matheson	Papers
Vancouver Island	Kenyon	Open File Maps, COALFILE
OFFICE PROJECTS:		
Coal Assessment Reports	Kenyon/Matheson	Public access, File data
COALFILE	Kenyon	and print-outs
Mine Development Review Process	All staff	Reports and consultation
Promotion of Development Potential	All staff	Talks & Poster Sessions
Research and Development Advice	Kilby/Ryan	Internal briefing & consultations
Fernie Coalfield Digital Coal Compilation	Grieve	OpenFile Maps

NEW INITIATIVES	RESPONSIBILITY	OUTPUT
Develop digital Procedures for map release, Peace River	Kilby/Cunningham	Open File Maps
Coalbed methane resource evaluations	Matheson	Reports
Organize and host the Canadian Coal and Coalbed Methane Geoscience Forum, Feb. 2-4, 1992	All Staff	

INDUSTRIAL MINERALS UNIT

OBJECTIVES

- Conduct regional and detailed industrial mineral deposit studies to determine the potential of the province's resources.
- Maintain a complete up-to-date inventory of industrial mineral occurrences.
- Monitor activity by the industrial mineral sector to provide timely advice to government.
- Provide timely evaluation of industrial minerals project proposals under review in the Mine Development Review Process and for land use studies.
- Promote industrial mineral development in British Columbia at the provincial, national and international levels.
- Provide information and advice to the exploration and mining industry, manufacturers, commodity traders, government agencies and the public.
- Conduct compilation studies, preliminary market assessments, mineral processing research and value-added studies on industrial minerals.

STAFFING AND RESOURCES

2 FTEs, 1.0 auxiliary support staff; $280,534

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
Update Industrial Minerals Map of B.C.	Hora	Open Files
Promotion of Industrial Minerals	Hora	Trade Show Displays, AIME, Industrial Minerals International Congress
Industrial Minerals Forum 1991	All Staff	Talks, Posters Field Trips
FINAL REPORT PREPARATION/PUBLICATION:		
Barite; Phosphates; Gypsum	Hora	Bulletins, Papers, Open Files & Information Circulars
Carbonatites; Kimberlites; Fluorspar	Pell/Hora	
Dimension Stone	Hora/Page	
Tertiary Basins	Read/Hora	
Chromite; Olivine	Hancock	
Feldspar	MacLean	
Limestone and Dolomite; Wollastonite	Fischl	

NEW INITIATIVES	RESPONSIBILITY	OUTPUT
Magnesite deposits SW B.C.	Simandl	Open File/Paper
Residual Kaolin, Vancouver Island	Fischl	Open File
Industrial Minerals Directory	Hora	Information Circular

MINERAL DEPOSITS UNIT

OBJECTIVES

- Conduct geologic and metallogenic studies of metallic mineral deposits, in order to determine their distribution and mode of formation.
- Develop deposit models to assist the mineral industry in the exploration for new deposits.
- Provide advice to the government on metallic mineral projects in the Mine Development Review Process.
- Contribute information to the provincial mineral occurrence database, MINFILE.
- Complete regional and provincial metallogenetic studies to assist in the assessment of the mineral potential of the province.

STAFFING AND RESOURCES

16 FTEs, 1 auxiliary support staff; $941,034

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
B.C. Skarns	Ray/Webster	Open File
Promotion of B.C.'s Metallic Mineral Deposits	All Staff	Talks, Courses, Consultations, Conferences, Field Trips
FINAL REPORT PREPARATION:		
Bralorne	Church	Report
Gataga	MacIntyre	Bulletin
Iskut Deposits	Alldrick/Britton	Report
Listwanites	Ash	Report
Purcell	Höy	Bulletin
Quesnel	Panteleyev	Bulletin
Rossland	Höy/Andrew	Bulletin

NEW INITIATIVES	RESPONSIBILTY
A new target - Intrusive Related Transitional Precious Metal Environments	Panteleyev
Expand Listwanite study to include Bralorne, Greenwood-Grand Forks and Rossland areas	Ash

MAPPING AND RESOURCE EVALUATION SECTION

OBJECTIVES

- Conduct systematic 1:50 000-scale regional geoscientific surveys of selected, poorly understood or under-explored parts of the province that may have high resource potential.
- Produce maps of this scale as essential precursors to evaluating resource potential and for making informed government decisions and aiding discovery of new, employment-generating world class and smaller mineral deposits to replace today's depleting mineable reserves.

STAFFING AND RESOURCES

A-Base-15 FTEs; $1,210,000

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
MAPPING PROJECTS:		
Nation Lakes	Nelson/ Bellefontaine	Open file maps and reports
FINAL REPORT PREPARATION:		
Taseko-Bridge River	Schiarizza/Gaba	Final reports and maps
Whitesail	Diakow	
Telkwa Range	MacIntyre/Desjardins	
Tagish	Mihalynuk	
Cassiar-Midway	Nelson	

NEW INITIATIVES	RESPONSIBILITY	OUTPUT
MULTI-YEAR PROJECTS:		
Iskut-North	Logan	Open File maps and reports
Stikine	Brown	
Tulsequah	Mihalynuk	

DISTRICT GEOLOGY SECTION

MANDATE

The District Geology Section is responsible for keeping an up-to-date record of mineral exploration and development in the province, responding to issues related to the Mine Development Review Process, Land Use, and Native Land Claims, providing training to prospectors in the Districts and advice and information to the mineral exploration community, other agencies and the general public. These responsibilities are carried out through five District Geologists, and one Senior Regional Geologist based in Vancouver.

OBJECTIVES

- Maintain an up-to-date inventory on the geology, mineral deposits, exploration trends and development in each district.
- Provide a timely response and input to project proposals under review in the Mine Development Review Process, and serve on Mine Review Committees.
- Provide information and advice to various agencies involved in all land use planning processes in the districts.
- Promote the mineral potential of each district.
- Provide advice and information to explorationists, prospectors, other agencies, and the general public.
- Assist in the administration and delivery of the Prospectors Training Program.
- Organize and assist in the delivery of mini-conferences in each district.
- Create and maintain a rock suite display of significant mineral deposits from each district.
- Assist in the evaluation and recommendations of land use studies in each district.

STAFFING AND RESOURCES

15 FTEs; $1,000,000

Five District Offices: Smithers, Prince George, Kamloops, Nelson and Victoria.

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
Geologic and Metallogenic studies	Lefebure/Faulkner Meyers/Legun/Wilton	Open File Reports & Maps, Expln. Review, Expln. Part B, Fieldwork reports, talks & poster sessions
Mine Development Review & Land Use advice	Lefebure/Faulkner Meyers/Legun/Wilton	MDRP responses, Mineral Potential Reviews
Geological Information & Mineral Development Potential	All Staff	Regional geological promotion, Consultations, meetings & field trips, talks, posters, Producers & Potential Map
Prospectors Training	Lefebure/Faulkner/ Meyers/Legun/Wilton	Basic & Advanced level courses, Prospectors Supervision & advice

NEW INITIATIVES	RESONSIBILITY
Research on porphyry deposits in NWBC	Lefebure
Study of volcanogenic massive sulphide deposits in Tulsequah Camp	Aldrick/Lefebure
Metallogenic studies in Vidette Camp and at Treasure Mountain	Meyers
Compilation of alkali porphyry deposits of southern Quesnel Trough	Faulkner
Geology of the CHT property	Faulkner
Mineral potential evaluation NTS 82G/NW	Legun
Metallogenic studies in the Northern Vancouver Island Copper Belt Geology & regional setting of Cimadora property	Wilton
Metallogenic studies in the Tofino-Kennedy Lakes area	Wilton
Compilation of the geology & metallogeny of the SW district	Wilton
Mineral deposits of the Stewart-Sulphurets-Bronson Creek area	Lefebure/Brown

OFFICE RELOCATION:	
Relocate the office for the Southwestern District from Victoria to Vancouver	Preto

VANCOUVER OFFICE

OBJECTIVES

- Ensure effective communication, consultation and liaison between Geological Survey Branch in Victoria and senior industry, government and university officials in Vancouver.
- Promote the mineral potential and development opportunities of the province.
- Maintain and provide access to a mini-research library and MINFILE workstation for public use.
- Provide information and advice to government to formulate policy and legislation for the effective management of mineral resources in B.C.

STAFFING AND RESOURCES

3 FTEs; $184,169

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
Prepare an annual Tabulation of Discovery Methods of B.C. Mines	Schroeter	Publication in the Provincial Geologist, Journal
Update data from Open File 1989-22 "Gold Production & Reserves in B.C."	Schroeter/Lane	Updated as Information Circular s Cordilleran Roundup display
Final report preparation Toodoggone River Area	Diakow Schroeter	Economic Geology (External)

NEW INITIATIVES	RESPONSIBILITY
Metallogenic and property studies of Red Mountain, Clisbako and Tulsequah areas	Schroeter/Lane
Examine, develop, and implement procedures re: 'Anticipated Mine Closures'	Schroeter District Geologists
Liaise with new Mineral Deposits Research Unit (UBC)	Schroeter

GEOSCIENCE INFORMATION SECTION

MANDATE

To provide advice and information on geoscience, exploration, and mineral resources to facilitate investment in the mineral resource sector, land use planning, research and development and to increase public awareness and appreciation of British Columbia's geology and the importance of its mineral resources.

PUBLIC INFORMATION UNIT

OBJECTIVES

- Increase the level of awareness and understanding of geoscience by British Columbians, so that they are better informed on key topics and issues of broad interest that affect everyday life in British Columbia, such as the environment, land and resource use, hazard planning and life-style dependance on raw materials.
- Organize and deliver, in cooperation with the District Geology Section, the Petrology for Prospectors Course, and the Advanced Prospecting training courses.
- Procure, through the British Columbia Museum of Mining, rock and mineral teaching sets for internal and external use.

STAFFING AND RESOURCES

2 FTEs; $187,000

ACTION PLAN

ACTIVITIES	RESPONSIILITY	OUTPUT
Assist in development of Earth Science "resource" packages & Curriculum/Materials	Massey	Supplementary
Coordinate classroom presentations for "Scientists in the Schools" Program	Massey	Schedule of school talks
Participate in "Public Fairs"	Massey	e.g. Earth Day, B.C. General Show Displays
Establish Media Contacts.	Massey	Articles, Fact Sheets
Establish links to "colleague" organizations	Massey	Updates to "Information Motherlode"
Petrology, advanced and basic prospecting courses	Pardy/Preto/ District Geologists	Courses delivered Trained prospectors
Rock and Mineral sets	Pardy	Sets procured

MINERAL INVENTORY UNIT

OBJECTIVES

- Review and approve/reject approximately 1200 mineral assessment reports annually submitted to maintain mineral claim tenure under the *Mineral Tenure Act.*
- Develop and maintain a mineral exploration, assessment report database - ARIS, and a mineral occurrence database - MINFILE & PROPERTY FILE, to stimulate and focus exploration and development of metallic and non-metallic minerals.
- Cost effectively distribute these multi-media databases and related maps to industry, government, academia and the public.
- Provide advice and application software to facilitate use of the databases.
- Promote technology/software development and transfer through cooperative interagency programs and commercial licencing agreements.
- Provide policy and legislative proposals to government.

STAFFING AND RESOURCES

7 FTEs; $621,287

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
Assessment Report Approval/	Kalnins/deGroot	Approvals/rejections
ARIS database	de Groot/Kalnins	Assessment Report distribution, Assessment Report Index
MINFILE	Jones/McPeek	Coding/updating occurrence descriptions Publishing MINFILE products & application software
Revised Regulations	McArthur/Kalnins	Draft regulations for *Mineral Tenure Act*
MINFILE Marketing Agreement	Smyth/McArthur/ Jones	Sales royalties from other agencies, Further project development

NEW INITIATIVES	RESPONSIBILITY
Enhance ARIS database & system, develop a portable credit accounting system (PAC), and automate map production	de Groot
Evaluate a PC LAN module for MINFILE & ARIS	Jones/McPeek/ deGroot

ENVIRONMENTAL GEOLOGY SECTION

MANDATE

The Section gathers and interprets geological, geochemical and geophysical data pertaining to the unconsolidated surficial layer mantling much of British Columbia. These studies promote economic development of mineral resources, and provide geoscientific data and analysis of environmental and natural geologic hazards. The Section is also responsible for providing analyses of mineral, rock and ore samples.

SURFICIAL GEOLOGY UNIT

OBJECTIVES

- Develop a comprehensive surficial geology database of the province to stimulate and focus industry evaluation and exploitation of surficial deposits (placer, sand and gravel, *etc.*) and buried mineral deposits in areas of thick overburden.
- Evaluate/demonstrate the capability of drift prospecting techniques in areas of thick overburden.
- Coordinate and develop a geologic hazards database and to contribute to the study and analysis of various geologic hazards related to the surficial environment.
- Provide advice & information to explorationists, prospectors, government and the general public.
- Promote external professional interest (university, consulting, *etc.*) in developing a Quaternary geology database for the province.

STAFFING AND RESOURCES

3 FTEs; $267,150

ACTION PLAN

ACTIVITY	RESPONSIBILITY	OUTPUTS
Drift prospecting/surficial mapping	Bobrowsky/Kerr	Fieldwork report, Expln. in BC, Open File maps, Roundup poster
Coordinate an integrated short-course on drift exploration	Bobrowsky/Kerr	Open File
Compile a placer gold database for the Cariboo	Levson	Open File External Publication
Evaluation of placer gold deposits in Atlin area	Levson	Fieldwork report, Open File Maps,Roundup Poster
Interpretation of subsurface geology of NE B.C.	Bobrowsky	Fieldwork report, External publication
Prepare discussion paper for Ministry executive on geologic hazards;document roles & responsibilities of various government agencies and identify critical gaps	Matysek/Bobrowsky	Discussion paper
Generate public information brochures on geologic phenomena relevant to the Quaternary environment	Bobrowsky, Levson	Information Circulars: "Earthquakes in B.C." "Gelogic Hazards in B.C."

ANALYTICAL SCIENCES LABORATORY

OBJECTIVES:

- **Provide timely analyses of rocks, minerals and ores in support of the Ministry's geological and geochemical surveys through in-house and contract services.**
- **Provide the Ministry with lapidary and photographic services.**
- **Administer and evaluate the British Columbia Assayers Certification program.**
- **Improve the laboratory's quality control program.**
- **Produce and publish open files using Survey Branch geochemical data and from thin section descriptions.**
- **Carry out research to improve the sensitivity and productivity of analytical methods.**
- **Provide advice and information on mineral analytical topics to the Ministry clients, other agencies and the general public.**

STAFFING AND RESOURCES

6 FTEs; $334,520

ACTION PLAN

ACTIVITY	RESPONSIBILITY	OUTPUTS
Analysis of rock, mineral and ore samples	Bhagwanani/ Chaudhry/Vilkos/ Colbourne/Lett	Major oxides, Trace elements, gold, XRD carbon, sulphur
Delivery of services on a user pay system	Lett	Delivery of services to the satisfaction of clients
Certification of Assayers and evaluation of program	Chaudhry/Lett	Evaluation report 2 examinations/year
Lapidary Services	Player	Thin sections, Photography
Open File publication of GSB analyses 1985-1990	Colbourne/Player/ Lett	Rock geochemical and thin section description
Research into improving analytical methods and developing new techniques	Lett/Bhagwanani/ Chaudhry/ Vilkos/Colbourne/	Open file publications, Reports on research results
Analytical aspects of acid mine drainage	Chaudhry/Lett	Open File Report

APPLIED GEOCHEMISTRY UNIT

OBJECTIVES

- Provide baseline geochemical data by conducting and releasing Regional Geochemical Surveys of the province for use by mineral exploration, environment and health industries, and government agencies.
- Provide advice and information to geologists, prospectors, government and private agencies, and the general public on matters of mineral exploration, environmental hazards and health issues relevant to geochemistry.
- Conduct research into sampling, analytical and interpretative techniques which through publications, poster sessions, and oral presentations, promote the use of geochemical methods.
- Develop methods in the processing and interpretation of geochemical data by computer assisted statistical and graphical techniques.
- Assist in the delivery of prospectors training programs at introductory and advanced levels.

STAFFING AND RESOURCES

2 FTEs; $258,250

ACTION PLAN

ACTIVITY	RESPONSIBILITY	OUTPUTS
Regional Geochemical Surveys – 1991 RGS Data Release 82G, 82J RGS Archive Data Release 82E, 82F, 82K, 82L, 82M	Matysek/Jackaman	2 Open File packages in booklet & digital format 5 Open File packages in booklet& digital format
Orientation Studies Vancouver Island/Chilcotin	Gravel/Sibbick	Open File, Paper
Drift Prospecting Case Studies of selected sites in B.C.	Gravel/Sibbick	Fieldwork/Expln in BC Reports
Prospectors Training	Gravel	Classroom and field site lectures

SCIENTIFIC REVIEW OFFICE

OBJECTIVES

- Compile, edit and ensure the timely and cost efficient publication of all geoscience data generated by the Geological Survey Branch.
- Expedite the production of approximately 100 publications during the year.
- Promote easier and more convenient access to publications and data from the Geological Survey Branch.
- Coordinate the B.C. Geoscience Research Grant Program and ensure research results are made available to the public and the mining industry.

STAFFING AND RESOURCES

5 FTEs; $494,343

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
PUBLICATION OF GSB RESEARCH RESULTS:		
Geological Fieldwork, 1991 Exploration in B.C. 12 Papers, 13 Bulletins, 30 Information Circulars 6 Geoscience Maps 6 Mineral Potential Maps 16 Open File Maps, 15 Open File Reports MINFILE - 10 map sheets & data Regional Geochemistry Survey - 7 map sheets & data 6 Release Notifications Misc. Promotions & Displays & reports	GSB & SRO Staff	Publications & Information available to Government industry & the public

NEW INITIATIVES	RESPONSIBILITY	OUTPUT
Enhancement of computer-aided drafting & desk-top publishing technology	SRO Staff	Maps & figures in digital format & processing of all publications
Promote the production of geoscience publications for education & public information	Grant/SRO Staff	Information Circulars and "Geology in B.C." booklet
Initiate New Series of Geoscience Maps	Grant/SRO Staff GSB Geologists	Geological Maps
Initiate New Series of Mineral Potential Maps	Grant/SRO staff GSB Geologists	Mineral Potential Maps
Improve the NTS Index to Publications to Include thesis & external publications	Grant	Comprehensive index of published material for B.C.
Produce Microfiche records for current and out-of-print publications	Grant/SRO Staff	Microfiche Records

BRITISH COLUMBIA GEOSCIENCE RESEARCH GRANT PROGRAM

OBJECTIVES

- Support innovative geological research projects within the province of British Columbia that are integrated with and/or complement Geological Survey Branch projects.
- Improve the geoscience database of the province by adding to the scientific literature on the geology of British Columbia.
- Assist original geoscientific research at universities and institutions of higher learning.
- Develop new concepts and techniques which will reduce exploration risk, aid in identifying new mineral wealth and assist in informed land use management within the province.

BUDGET

$95,000

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
Disbursement of about 20 geoscience research grants	Managers SRO	Publications and scientific expertise available to government, industry, and public

FINANCE AND ADMINISTRATION SECTION

OBJECTIVES

- **Provide guidance, technical direction and training on Finance and Administration issues to staff.**
- **Develop procedures that streamline Financial and Administrative processes within the Branch.**
- **Assist Branch Managers in the development and management of Branch budgets.**
- **Produce meaningful and timely Financial Management Reports.**
- **Provide assistance and guidance to Branch Managers on various personnel-related issues.**
- **Provide reception and mail services for the Branch.**
- **Process all financial documents through Office Management System.**

STAFFING AND RESOURCES

3 FTEs; $89,211

ACTION PLAN

ACTIVITIES	RESPONSIBILITY	OUTPUT
OMS Consolidation	New Position	Up-to-date accurate financial inform.
Branch Procedures	Marshall	Streamline processes